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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/533,334 | 05/18/2007 | Terence James Roycroft | 30451/04013 | 5157 |

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| EXAMINER | |
|---|---|
| OLSON, LARS A | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3617 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 08/08/2008 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/533,334 | ROYCROFT, TERENCE JAMES | |
| | Examiner | Art Unit | |
| | Lars A. Olson | 3617 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-6,8 and 9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8 and 9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 May 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08042005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. A preliminary amendment was received from the applicant on May 2, 2005.

2. Claim 7 has been canceled.

### *Claim Objections*

3. Claims 1 and 2 are objected to because of the following informalities: The terms "non-plugging" and "plugging" should be corrected to read "non-plunging" and "plunging", as filed in the original claims. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roycroft et al. (US 5,531,179) in view of Krude (US 4,632,203)

Roycroft et al. discloses an amphibious vehicle, as shown in Figures 1A-5, that is comprised of a body, defined as Part #2, retractable road wheels, defined as Part #3R in a retracted position, that are movable between protracted and retracted positions, as shown in Figure 5, a wheel drive shaft, defined as Part #10, that is connectable to a prime mover, defined as Part #4, an inner constant velocity joint, defined as Part #17,

and an outer constant velocity joint, defined as Part #18. Said vehicle is also fitted with a planing hull, as shown in Figure 1A.

Roycroft et al., as set forth above, discloses all of the features claimed except for the use of an inner constant velocity joint being of a fixed type, and an outer constant velocity joint being of a plunging type.

Krude discloses an independent wheel suspension system, as shown in Figures 1-3, that includes an inboard constant velocity joint, defined as Part #40, a wheel drive shaft, defined as Part #46, and an outboard constant velocity joint, defined as Part #54, as shown in Figure 3. Krude indicates that it is known in the art for one of said constant velocity joints to be of a plunging type, and the other of said constant velocity joints to be of a fixed type, as described in lines 37-43 of column 3.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize an inner constant velocity joint being of a fixed type, and an outer constant velocity joint being of a plunging type, as taught by Krude, in combination with the amphibious vehicle as disclosed by Roycroft et al. for the purpose of providing an amphibious vehicle with an independent wheel suspension having a greater articulation angle range of a wheel with respect to a drive shaft.

6. Claims 3-6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roycroft et al. in view of Krude, and further in view of Gibbs (US 6,957,991).

Roycroft et al. in combination with the teachings of Krude shows all of the features as claimed except for the use of a constant velocity joint with a decoupler that incorporates a synchromesh mechanism.

Gibbs discloses a power train for an amphibious vehicle, as shown in Figures 1-10, that includes a longitudinally mounted prime mover, defined as Part #8, a wheel drive shaft, defined as Part #7, a pair of decouplers, defined as Parts #24 and 26, and a pair of constant velocity joints, defined as Parts #28 and 30, where said decouplers can incorporate a synchromesh mechanism and are combined with said constant velocity joints, as described in lines 45-54 of column 5.

The examiner takes official notice that the use of a transversely mounted prime mover instead of a longitudinally mounted prime mover is well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a decoupler with a synchromesh mechanism in combination with a constant velocity joint, as taught by Gibbs, in combination with the amphibious vehicle as disclosed by Roycroft et al. and the teachings of Krude for the purpose of providing an amphibious vehicle with a means to selectively decouple road wheels from a prime mover while said vehicle is in a marine mode.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hopson (US 6,582,151), Krude et al. (US 4,611,681) and Smith et al. (US 3,688,521) disclose constant velocity universal joints for use with independent wheel suspension systems.

8. Any inquiry concerning this communication from the examiner should be directed to Exr. Lars Olson whose telephone number is (571) 272-6685.

lo

July 31, 2008

/Lars A Olson/

Primary Examiner, Art Unit 3617